

CLAIMS

1. A direct optical biometric sensor (10; 50) comprising detecting means (12; 52) for detecting radiation and radiation directing means (18, 20, 16; 58, 60, 56) for directing radiation from a point of contact (11; 51) of an individual with the radiation directing means towards the detecting means in response to contact of the individual with the radiation directing means at the point of contact, characterised in that the radiation directing means comprises a planar slab waveguide (16; 56) having a core layer with a region which is at least partly exposed and means (18, 20; 58, 60) for introducing radiation into the core layer such that radiation propagates throughout the exposed region thereof.
2. A sensor according to claim 1 wherein the sensor further comprises an interference filter (55) disposed between the planar slab waveguide and the detecting means.
3. A sensor according to claim 1 or claim 2 wherein the means for introducing radiation into the core layer of the planar slab waveguide comprises one or more diode lasers (18, 20; 58, 60) or light-emitting diodes.
4. A biometric sensor substantially as hereinbefore described with reference to Figure 1.
5. A biometric sensor substantially as hereinbefore described with reference to Figure 2.
6. An electronic apparatus comprising a sensor according to any preceding claim.
7. A method of forming a representation of an individual's fingerprint or palmprint comprising the step of directing radiation from one or more points of contact of the individual with the core of an optical waveguide towards a

detector, characterised in that the radiation is so directed by the step of placing the individual's finger in contact with the core of a planar slab waveguide so as to cause radiation initially guided therein to be diverted out of the core and towards the detector.